

CLAIMS

I claim:

1. A restraint apparatus for restraining a person, comprising:

5 a first cuff module to be applied to the person's first limb, said cuff module comprising a first cuff body having a first outer surface, a first rigid loop positioned substantially perpendicular to said first outer surface, and a second rigid loop also positioned substantially perpendicular to said first outer surface at a first predetermined distance away from said first rigid loop;

10 a second cuff module to be applied to the person's second limb, said second cuff module comprising a second cuff body having a second outer surface, a third rigid loop positioned substantially perpendicular to said second outer surface, and a fourth rigid loop also positioned substantially perpendicular to said second outer surface at a second predetermined distance away from said third rigid loop;

15 a first cuff interconnect having a first flat flexible elongated body sized and configured to fit through said first, second, third and fourth rigid loops, and having a first end, a second end, a first top surface and a first bottom surface;

20 a first releasable attachment device, positioned along a first portion of said first top surface, said first portion being proximal to said second end, to attach a first and a second region of said first portion to each other when said first portion is folded upon itself; and

securing means for attaching said first body to one of said first, second, third and fourth rigid loops, and when said first and second cuff modules

are applied to the person's limbs, threading said first body through the other of said first, second, third and fourth rigid loops and around the person's body and folding said first portion of said first body upon itself to activate said first releasable attachment device by bringing said first and second regions into contact to secure
5 said first cuff interconnect around the person's body and to secure said first and second cuff modules to sides of the person's body, such that the range of motion of the person's first and second limbs is significantly restricted.

2. The restraint apparatus of claim 1 wherein said securing means
10 comprises:

a first connector to connect said first end of said first body to said first rigid loop, wherein said first and second cuff modules are positioned a third predetermined distance apart from one another, and oriented such that said first rigid loop substantially faces said third rigid loop, and wherein:

15 (1) said second end of said first body is threaded through said third rigid loop and folded back upon itself toward said first cuff module and then threaded through said second rigid loop,

(2) said partially folded body is positioned in front of the person's waist and said second end is pulled over the back of the person's waist
20 toward said second cuff module to pull said first and second cuff modules into contact with the sides of the person's waist,

(4) said second end is threaded through said fourth rigid loop and then pulled toward said first cuff module to fully secure said first and second

cuff modules to the sides of the person's waist wherein said first and second regions of said portion are arranged to at least partially face one another, and

(5) said first releasable attachment device is activated to releasably attach said first and second regions of said first portion to each other
5 thereby securing said first and second cuff modules to the person's body such that the range of motion of the person's limbs is significantly restricted.

3. The restraint apparatus of claim 2, wherein said third distance is sufficient to encompass approximately one half of the person's waist.
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4. The restraint apparatus of claim 1, further comprising: a stiffening element disposed at said second end of said first body to facilitate threading of said second end through at least one of said first, second, third and fourth rigid loops.

15 5. The restraint apparatus of claim 1, further comprising:
means for configuring the restraint apparatus for storage and transport.

6. The restraint apparatus of claim 5, wherein said means for
20 configuring further comprises:

at least one elastic band disposed on said first body between said first end and said first portion of said first body, wherein in a storage and transport configuration said first body is attached to said first rigid loop, threaded through

said third rigid loop, folded back upon itself at least once, and then stowed under said at least one elastic band.

7. The restraint apparatus of claim 6, wherein said at least one elastic
5 band is secured to one of said first top surface and said first bottom surface.

8. The restraint apparatus of claim 6, wherein said at least one elastic
band is disposed around said first body, and is moveable along said first body.

10 9. The restraint apparatus of claim 6, wherein said means for
configuring further comprises: a second releasable attachment device positioned
proximal to said first end of said body and configured for releasable connection to
at least a portion of said first releasable attachment device when the restraint
device is configured for storage and transport.

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10. The restraint apparatus of claim 1, wherein said first releasable
attachment device comprises a first at least one attachment element comprising
one of hook or loop attachment material, positioned on said first top surface in said
first region and a second at least one attachment element comprising the other of
20 hook or loop attachment material, positioned on said first top surface in said
second region, such that when said first releasable attachment device is engaged,
said first at least one attachment element is releasably connected to said second at
least one attachment element.

11. The restraint apparatus of claim 2, wherein said first connector comprises a third releasable attachment device to connect said first end of said first body to said first rigid loop.

5 12. The restraint apparatus of claim 11, wherein said third releasable attachment device comprises:

a first elongated loop positioned on said first top surface at a fourth predetermined distance from said first end;

10 a second elongated loop positioned next to said first elongated loop on said first top surface at said fourth predetermined distance from said first end;

a first hole defined proximal to said first end, and a second hole next to said first hole defined proximal to said first end, said first and second holes being positioned and sized such that when said first end is threaded through said first rigid loop in an upward direction and then folded upon itself, said first and second
15 holes are aligned with said first and second elongated loops so that said first and second elongated loops pass through said respective first and second holes to thereby at least temporarily connect said first end of said first body to said first rigid loop;

a generally U-shaped element having a first segment sized and
20 configured to fit though said first elongated loop once said first elongated loop is passed through said first hole, and a second segment sized and configured to fit though said second elongated loop once said second elongated loop is passed through said second hole;

a retaining device positioned proximal to said first and second elongated loops that receives and retains said first and said second segments after they are passed through said first and said second elongated loops, wherein when said first end is passed through said first rigid loop and folded back upon itself to pass said first and second elongated loops through said respective first and second holes, said first segment is threaded through said first elongated loop and into said retaining device and said second segment is threaded through said second elongated loop and into said retaining device, to thereby releasably secure said first end to said first rigid loop.

13. The restraint apparatus of claim 12, wherein said retaining device further comprises a guide device disposed within said retaining device, that guides said first and said second segments into said retaining device.

14. The restraint apparatus of claim 12, further comprising: a first ring positioned and configured to reinforce said first hole, and a second ring positioned and configured to reinforce said second hole.

15. The restraint apparatus of claim 12, wherein said U-shaped element is selected from a group consisting of: a wire, a plastic member, and a wire coated with a resilient material.

16. The restraint apparatus of claim 1, wherein:

said first cuff module further comprises:

a first cuff segment terminating in a first rigid element,

and

a fifth rigid loop positioned proximal to said second rigid loop sized and configured to pass said first cuff segment and said first rigid element therethrough, wherein when said first cuff module is applied to one limb, said first rigid element is threaded through said fifth rigid loop and tightened; and

said second cuff module further comprises:

a second cuff segment terminating in a second rigid element, and

a sixth rigid loop positioned proximal to said fourth rigid loop sized and configured to pass said second cuff segment and said second rigid element therethrough, wherein when said second cuff module is applied to the other limb, said second rigid element is threaded through said sixth rigid loop and tightened.

17. The restraint apparatus of claim 16, wherein said first rigid element comprises a first releasable connector configured to releasably connect to a first external restraint device, and wherein said second rigid element comprises a

second releasable connector configured to releasably connect to a second external restraint device.

18. The restraint apparatus of claim 1, further comprising:

5 a third cuff module to be applied to the third limb of the person;
a fourth cuff module to be applied to the fourth limb of the person;
a second cuff interconnect having a second flat flexible elongated
body of a first length having a third end and a fourth end;
a second connector for attaching said third end to said third cuff
10 module;
a third connector for attaching said fourth end to said fourth cuff
module; and
a third releasable connector, positioned between said third and said
fourth end, and facing perpendicular to said second body, configured to releasably
15 connect to a third external restraint device.

19. The restraint apparatus of claim 18, wherein said second connector
comprises a fourth releasable connector that releasably connects to said third cuff
module, and wherein said third connector comprises a fifth releasable connector
20 that releasably connects to said fourth cuff module.

20. The restraint apparatus of claim 18, further comprising pivotable connection means for connecting said third releasable connector to said second body, such that said third releasable connector may be oriented to point in any direction substantially perpendicular to said second body.

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21. The restraint apparatus of claim 19, wherein said pivotable connection means is positioned at an approximate midpoint of said second body between said third end and said fourth end.

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22. The restraint apparatus of claim 18, further comprising at least one tensioning device positioned along said second body to change said first length of said second body and thus a distance between said third and fourth cuff modules.

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23. A restraint apparatus for restraining a person, comprising:

- a first cuff module to be applied to a first limb of the person;
- a second cuff module to be applied to a second limb of the person;
- a cuff interconnect having a flat flexible elongated body of a predetermined length having a first end and a second end;
- a first connector for attaching said first end to said first cuff module;
- a second connector for attaching said second end to said second cuff module; and

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a first releasable connector, positioned between said first and said second end, and facing perpendicular to said first body, configured to releasably connect to an external restraint device.

5 24. The restraint apparatus of claim 23, wherein said first connector comprises a second releasable connector that releasably connects to said first cuff module, and wherein said second connector comprises a third releasable connector that releasably connects to said second cuff module.

10 25. The restraint apparatus of claim 23, further comprising pivotable connection means for connecting said first releasable connector to said body, such that said first releasable connector may be oriented to point in any direction substantially perpendicular to said body.

15 26. The restraint apparatus of claim 23, further comprising at least one tensioning device positioned along said body to change said predetermined length of said body and thus a distance between said first and second cuff modules.

20 27. A method for restraining a person by applying restraints to at least one limb of a person, comprising the steps of:

(a) providing:

a first cuff module to be applied to the first limb of a person, said cuff module comprising a first cuff body having a first outer surface, a

first rigid loop positioned substantially perpendicular to said first outer surface, and a second rigid loop also positioned substantially perpendicular to said first outer surface at a first predetermined distance away from said first rigid loop,

5 a second cuff module to be applied to the second limb of a person, said second cuff module comprising a second cuff body having a second outer surface, a third rigid loop positioned substantially perpendicular to said second outer surface, and a fourth rigid loop also positioned substantially perpendicular to said second outer surface at a
10 second predetermined distance away from said third rigid loop, and

 a first cuff interconnect having a first flat flexible elongated body sized and configured to fit through said first, second, third and fourth rigid loops, and having a first end, a second end, a first top surface and a first bottom surface, and having a first releasable attachment device,
15 positioned along a first portion of said first top surface, said first portion being proximal to said second end, to attach a first and a second region of said first portion to each other when said first portion is folded upon itself;

 (b) attaching said first body to one of said first, second, third and fourth rigid loops;

20 (c) applying said first and second cuff modules to the person's limbs;

 (d) securing said first and second cuff modules to the person's body by threading said first body through the other of said first, second, third and fourth rigid loops and around the person's body and folding said first portion of said first

body upon itself, to secure said first body with said first releasable attachment device, such that the range of motion of the person's first and second limbs is significantly restricted.

5 28. The method of claim 27, wherein:

said step (b) comprises the step of:

(e) providing a first connector to connect said first end of said first body to said first rigid loop; and

said step (c) further comprises the step of:

10 (f) applying said first and second cuff modules to the person's limbs, such that said first and second cuff modules are oriented toward one another so that said first rigid loop substantially faces said third rigid loop.

15 29. The method of claim 28, wherein said step (d) comprises the steps of:

(g) threading said second end of said first body through said third rigid loop;

(h) folding said first body back upon itself toward said first cuff module;

20 (i) threading said second end of said first body through said second rigid loop;

(j) positioning said partially folded body in front of the person's waist;

(k) pulling said second end over the back of the person's waist toward said second cuff module to pull said first and second cuff modules into contact with the sides of the person's waist;

(l) threading said second end through said fourth rigid loop;

5 (m) pulling said second end toward said first cuff module to fully secure said first and second cuff modules to the sides of the person's waist;

(n) arranging said first and second regions of said portion to at least partially face one another, and

(m) engaging said first releasable attachment device by placing said
10 first and second regions of said first portion in contact with each other, thereby securing said first and second cuff modules to the person's body such that the range of motion of the person's limbs is significantly restricted.

30. The method of claim 27, further comprising the steps of:

15 (o) providing a third cuff module to be applied to the third limb of the person; a fourth cuff module to be applied to the fourth limb of the person; a second cuff interconnect having a second flat flexible elongated body of a first length having a third end and a fourth end; a second connector for attaching said
20 third end to said third cuff module; a third connector for attaching said fourth end to said fourth cuff module; and a releasable connector, positioned between said third and said fourth end, and facing perpendicular to said second body, configured to releasably connect to an external restraint device; and

(p) applying said third cuff module to the third limb and applying said fourth cuff module to said fourth limb.

31. The method of claim 30, further comprising the step of:

5 (q) connecting said releasable connector to said external restraint device.

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